

MTC6A Cable Installation Instructions

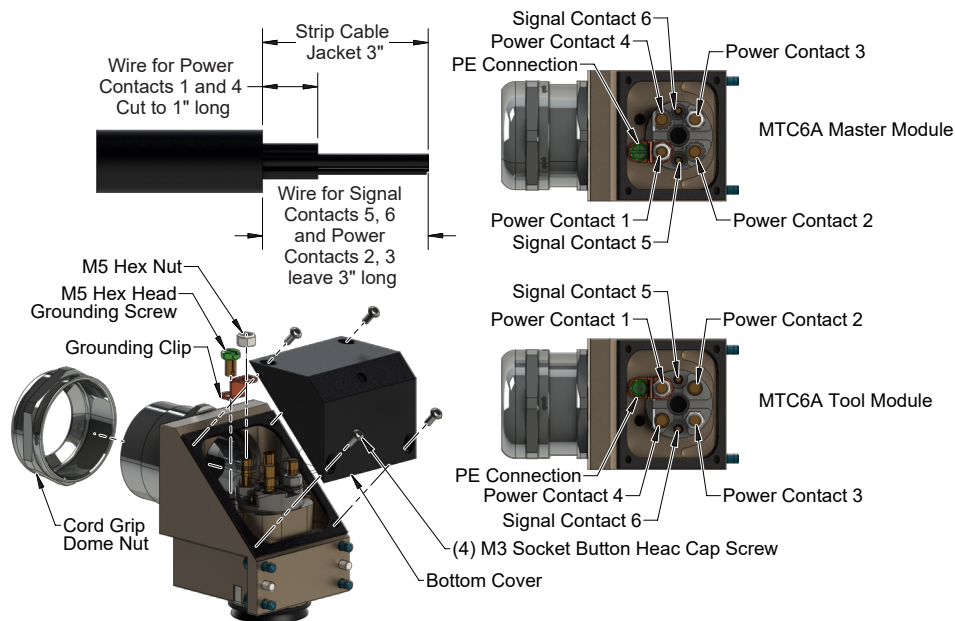
Parts required: Nuts and ring terminals supplied with module p/n 9005-20-8740 (which includes: 9600-20-1401, 9600-20-1402, and 9600-20-1403)

Tools required: 50 mm hex wrench, 2 mm hex key, 5.5 mm and 8 mm socket and ratchet wrench, crimping tool, wire strippers, heat gun, torque wrench

Supplies required: heat shrink, Loctite® 222, Loctite primer 7649

1. Using a 2 mm hex key remove the (4) M3 socket button head cap screws securing the bottom cover to the module.
2. Using a 50 mm hex wrench remove the dome nut from the cord grip.
3. Refer to [Figure 1.1](#) to identify the power and signal contact terminals.
4. The PE connections is installed from ATI on Power Contact #1, if PE connection is not desired preform steps 4a through 4c otherwise go to step 5.
 - a. Remove the M5 hex nut using an 8 mm socket wrench.
 - b. Using a phillips head screw driver remove the M5 hex head grounding screw and remove the grounding clip.
 - c. Replace the M5 hex nut and tighten to 20 in-lbs (2.3 Nm) using an 8 mm socket wrench.

Figure 1.1—Strip Cable Jacket and Identify Contact Terminals

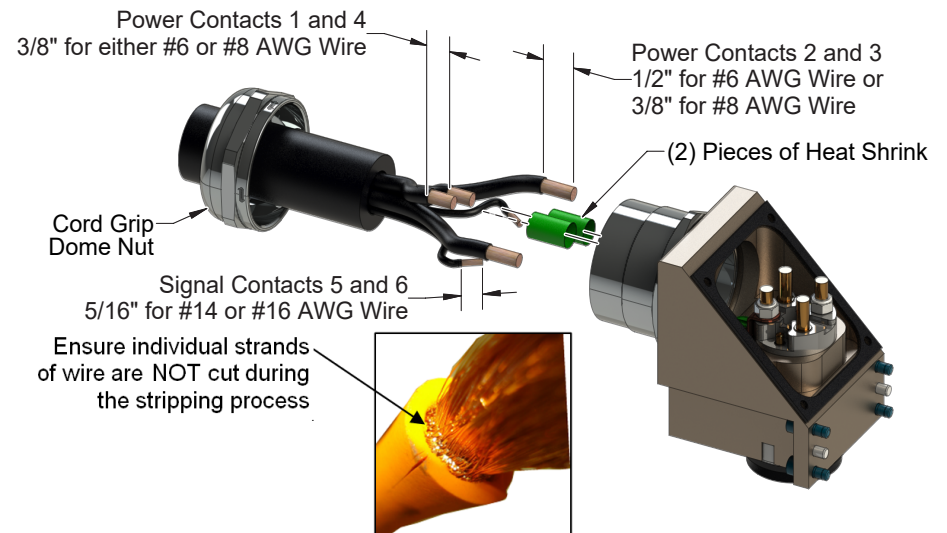


5. Strip the external cable jacket back 3", be careful not to cut internal wire insulation.
6. Cut the wires for the power contact 1 and 4 to 1" long.
7. Slide the cord grip dome nut onto the cable, refer to [Figure 1.2](#).
8. If using #8 AWG wire remove the (8) ring terminals from the plastic bag ATI part number 9600-20-1401. If using #6 AWG wire remove the (8) ring terminals from the plastic bag ATI part number 9600-20-1402.

NOTICE: ATI supplies spare parts in the kits in case parts are lost or improperly crimped. ATI also provides ring terminals for both #6 and #8 AWG wire. Not all of the parts are required for proper assembly.

9. Prepare the wire ends by stripping the insulation back. Be careful not to cut individual strands.
 - a. For power contacts 2 and 3, if using #8 AWG wire strip the insulation back 3/8" for the flag ring terminals, if using #6 AWG strip the insulation back 1/2" for the flag ring terminals.
 - b. Strip wire insulation 3/8" for power contacts 1 and 4.
 - c. Strip wire insulation 5/16" for signal contacts 5 and 6.
 - d. Cut (2) pieces of heat shrink 5/8" long to fit over the #1 and #4 power contact wires and ring terminals.
10. Slide the pieces of heat shrink over the power contact wire 1 and 4.

Figure 1.2—Wire Stripping



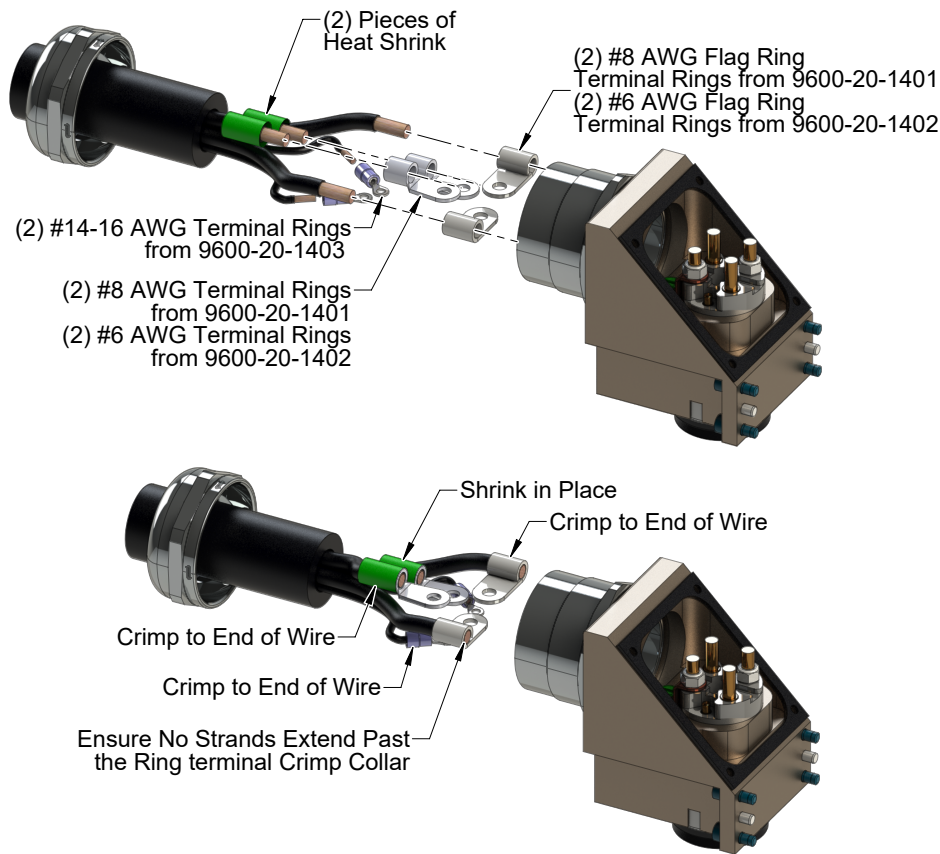
- Slide ring terminals on the stripped ends of the wire and crimp ring terminals to the wire. Ensure no strands extend past the ring terminal crimp collar.

NOTICE: For power contacts 2 and 3 use the flag ring terminals, the terminals should be crimped in the opposite direction of one another and oriented facing up to fit properly as shown in [Figure 1.3](#).

NOTICE: Not all Ring terminal crimping tool are suitable for flag ring terminals. Consult with the crimp tool manufacturer or ATI for suitable crimping tools.

- For power contacts 1 and 4 slide the heat shrink over the ring terminal as shown in [Figure 1.3](#) and shrink in place using a heat gun.

Figure 1.3 —Crimping the Ring Terminal



- Remove the (4) ring terminals, (4) M3 hex nuts, and (4) M5 hex nuts from the plastic bag ATI part number 9600-20-1403.
- Attach the signal contact 5 and 6, secure using (2) M3 hex nuts. Tighten to 12 in-lbs (1.5 Nm) using an 5.5 mm socket wrench.
- Attach the power contact 2 and 3, secure using (2) M5 hex nuts. Tighten to 20 in-lbs (2.3 Nm) using an 8 mm socket wrench.
- Attach the power contact 1 and 4, secure using (2) M5 hex nuts. Tighten to 20 in-lbs (2.3 Nm) using an 8 mm socket wrench.
- Apply Loctite primer 7649 and Loctite 222 to the (4) M3 socket button head cap screws.
- Make sure the bottom cover gasket is in place and install the bottom cover. Secure with (4) M3 socket button head cap screws using a 2 mm hex key. Tighten to 48 in-oz (34 N cm).

NOTICE: If bottom cover does not go on, cover is not oriented properly or ring terminals may not be positioned properly. Either rotate cover 180 degrees or reposition the ring terminals to allow the bottom cover separator rib to go in between the ring terminals. Refer to [Figure 1.4](#).

- Tighten the cord grip dome nut to secure the cable using a 50 mm hex wrench. Tighten until cable is secured, torque may vary depending on cable approximately 50 in-lbs (5.6 Nm).

Figure 1.4—Connecting the Ring Terminal

